



CO₂ INCUBATOR



Quality, Management, Environment, Health & Safety Standards



CDSCO MD 5 License



USFDA Listed



European CE



ISO 9001:2015
IAF



ISO 13485:2016
NABCB/IAF



ISO 45001 : 2018
IAF



7 Electric Safety Certifications
IEC 60335-1 and IEC 60335-2-24, IEC 61010-1,
IEC 61010-2-020 and 61010-2-101, IEC 61326-1,
IEC 61326-2-6.

INTRODUCTION

MarkEn CO₂ Incubator is designed to create the ideal environment for cell, tissue, and biological product incubation under precisely controlled conditions. With reliable regulation of temperature, humidity, and CO₂ levels, it provides a sterile humidified incubation environment for cell culture applications while ensuring optimal growth and contamination control—making it a dependable solution for research, biotechnology, and clinical laboratories.



SALIENT FEATURES OF CO₂ INCUBATOR



Precise CO₂ Control: Advanced infrared sensors ensure consistent and accurate CO₂ levels. Adjustable CO₂ range from 1% to 20% for diverse cell culture requirements. The system also Direct Heat and Air Jacketed.



Optimal Temperature Regulation Uniform temperature distribution within a range of +5°C above ambient to 60°C, supported by over-temperature protection for enhanced safety. The direct air-jacketed CO₂ incubator design, combined with high-quality Rockwool insulation and fan-assisted circulation, ensures stable temperature control and rapid thermal recovery. Fanless chamber operation minimizes the risk of contamination.



Humidity Control Maintains high humidity levels up to >95% RH at 37°C to prevent cell desiccation, featuring an integrated covered water reservoir with level sensor, 3-liter stainless-steel humidity pan, temperature-resistant infrared CO₂ and TC sensors, 1% increment humidity display, and a programmable low RH alarm for consistent humidity control



Contamination Prevention HEPA filtration system maintains ISO Class 5 clean room-like air quality within five minutes after 30-second door opening, with HEPA microorganism and microbial CO₂ inlet filters providing 99% filtration efficiency for bacteria and dust particles below 0.3 μm while supplying purified CO₂ into the incubator chamber; supports 180°C heat decontamination cycle within 12 hours with 12 Log sterility assurance level for enhanced contamination control.



User-Friendly Interface: Interactive navigator touchscreen for complete data visibility, door-mounted for easy access. On-screen menu prompts, error and usage logs, data logging, performance trend graphing, and multiple language selection.



Energy Efficient Low power consumption with eco-friendly design. Insulated chamber for reduced heat loss and energy efficiency. Sterilization Cycle minimum 180°C



Advanced Technology Active airflow technology ensures uniform environmental conditions and rapid recovery of critical growth parameters within approximately 5–10 minutes after 30-second door opening, with recovery to 5% CO₂ in approx. 3 minutes and 37°C in approx. 8 minutes; includes automatic calibration of electronic measurement and control functions, USB data output port, and standard access port for insertion of cables, plugs, and tubing

TECHNICAL SPECIFICATION	
Make	MarkEn
Type	Advanced CO ₂ incubator
Application	Suitable for in-vitro cell culture and bacterial culture studies
Capacity	150 L
Construction & Material	Outer chamber made of epoxy powder-coated mild steel with rust-proof SS 304 polished stainless-steel inner chamber for hygienic operation, durability, and corrosion resistance
Chamber Design	Rounded corner chamber design for easy cleaning and contamination control
Door Design	Solid outer door with inner glass door for full sample visibility without disturbing chamber conditions
CO₂ Concentration	1-20%
CO₂ Range	0–20% v/v
CO₂ Control Resolution	±0.1% CO ₂ control resolution with IR sensing technology
CO₂ Sensor	Infrared (IR) CO ₂ sensor
Temperature Range	5°C to 60°C (±1°C), with accuracy of ±0.1°C at 20°C and uniformity of ±2.0°C.
Temperature Performance	Maintains stable temperature at 37°C
Temperature Sensor	Capillary Thermostat
Shelves	3 adjustable, removable, and washable shelves
Control System	Advanced microprocessor-based PID control system with LCD display for precise, stable, uniform environmental regulation, parameter control, and real-time monitoring
Alarm System	Independent audio-visual alarm system for temperature deviation, over-limit condition, door open duration, UV operation status, CO ₂ concentration, and concentration difference alerts
Recovery Performance	Fast recovery after 30-second door opening with recovery to 5% CO ₂ in approx. 3 minutes and 37°C in approx. 8 minutes
Air Circulation System	Automatic air circulation control for uniform temperature maintenance without internal fan turbulence or vibration
Condensation Prevention	Door temperature controller prevents condensation formation on glass door
Heating System	Air-jacketed hot-air sterilizing circulation system
Dry heat sterilization	180°C
Power Supply	220V, 50Hz single phase AC power supply
CO₂ Accessories	Supplied with minimum two CO ₂ cylinders, two-stage CO ₂ gas regulator with barbed connection and shut-off valve, and built-in automatic CO ₂ gas guard switching system

ALL-IN-ONE SOLUTION FOR

Cold Chain Solution
Medical Equipment
Blood Bank Equipment

Hospital & Scientific Equipment
Hospital Furniture & Infrastructure
Commercial Refrigeration



25+

Years of Excellence



400+

Product Range



500+

Service center



1000+

Committed Engineers



1,00,000+

Satisfied Users

CERTIFICATION



10 products tested by a WHO-PQS accredited laboratory



Intertek



ISO 14001: IAF



WHO GMP



BIFMA Certified, BIFMA Level 3



ASTM- Corrosion Free Products



ISO 2409

EN 13523-26,
ISO 13849-1,
IP 69, IP 65

& MANY OTHER...

OUR ESTEEMED CUSTOMERS



& MANY MORE...



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